

STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

REPORT OF EXAMINATION

TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

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Surface Water

(Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

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Ground Water

(Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE July 24, 1980	APPLICATION NUMBER G4-30254	PERMIT NUMBER	CERTIFICATE NUMBER
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NAME  
Milo B. Bauder

ADDRESS (STREET) 120 Meadows Hills Dr. 423 Greenbrook Place	(CITY) Richland	(STATE) Washington	(ZIP CODE) 99352
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PUBLIC WATERS TO BE APPROPRIATED

SOURCE  
a well

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE 2250	MAXIMUM ACRE-FEET PER YEAR 508
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QUANTITY, TYPE OF USE, PERIOD OF USE

468 acre-feet per year for irrigation of 120 acres from April 1 to October 31;  
40 acre-feet per year for frost protection.

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION-WITHDRAWAL

200 feet east and 200 feet south from center of Section 17.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION) NW¼SE¼	SECTION 17	TOWNSHIP N. 7	RANGE, (E. OR W.) W.M. 31 E.	W.R.I.A. 31	COUNTY Benton
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RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
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LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Govt. Lots 3 and 4 of Section 17 containing 59.64 acres, plus or minus; Govt. Lot 1, the N½SE¼NE¼, the SE¼SE¼NE¼, the E½E½SE¼ of Section 20 containing 59.85 acres, plus or minus; all in T. 7 N., R. 31 E.W.M., Benton County, State of Washington, said tract of land lying westerly of the westerly right-of-way line of the existing Spokane, Portland, and Seattle Railway Company.



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**DESCRIPTION OF PROPOSED WORKS**

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A well to be drilled 310 feet deep and 16 inches in diameter. Distribution system to consist of 14-inch mainline and 6000 undertree permanent set sprinklers.

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**DEVELOPMENT SCHEDULE**

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BEGIN PROJECT BY THIS DATE:

April 1, 1993

COMPLETE PROJECT BY THIS DATE:

April 1, 1994

WATER PUT TO FULL USE BY THIS DATE:

April 1, 1995

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**REPORT**

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Background

On May 7, 1990, Milo B. Bauder filed an application to appropriate public ground waters. The application was accepted, assigned number G4-30254 and public notice was made. The 30-day protest period expired with no protests being received.

Investigation

The following information was obtained from a site inspection conducted by Philip Kerr on November 14, 1991, research of department records, and conversations with the applicant and department staff.

The applicant requests an authorization to withdraw 2250 gpm from a proposed well, hereafter referred to as subject well; for the irrigation during irrigation season, and frost protection of 120 acres of cherry trees. The property is located along the Columbia River approximately 20 miles south of Kennewick. Subject well is not drilled, but is proposed to be located approximately 200 feet east and 200 feet south from the center of Section 17, being within the NW $\frac{1}{4}$ SE $\frac{1}{4}$  of Section 17, T. 7 N., R. 31 E.W.M. The well is intended to be 310 feet deep, 16 inches in diameter, and fitted with a 300 horsepower turbine pump. Water will be pumped through a 14-inch mainline to approximately 6000 undertree permanent set sprinklers. The sprinklers should be capable of five (5) gallons per minute (gpm) each. When pumping at 2250 gpm, approximately 450 sprinklers can be operated per set. The normal instantaneous rate required to serve a project of this size is less than 10 gallons per minute per acre. The higher rate requested is considered for operational convenience.

According to the State of Washington Irrigation Guide, undertree sprinklers to irrigate a cherry orchard with cover crops in the Kennewick area with 70% delivery efficiency would require approximately 3.9 acre-feet of water per acre per season or 468 acre-feet annually for 120 acres from April 1 through October 31.

Frost protection requirements (according to the Washington State University, College of Agriculture, Pullman, Washington; Extension Bulletin No. 634, dated January 1987, titled "Frost and Frost Control in Washington Orchards") are approximately 31.7 gpm per acre for undertree sprinklers. At this rate when pumping the requested 2250 gpm, only 70.9 acres could be frost protected at any given time. At the maximum rate of 2250 gpm for 96 hours (the assumed frost incidence), 40 acre-feet per year of frost protection water would be needed.

There are no Water Right Certificates or Claims within 1 $\frac{1}{4}$  miles of subject well.

The author believes this well will be in continuity with the Columbia River until proven differently by the wells hydraulic response or characteristics after it is drilled. Should the subject well not be in continuity with the Columbia River the priority date would be May 7, 1990. If it is in continuity with the river, the priority date would be July 24, 1980, as the water withdrawn would be part of the McNary Pool reserved waters and the following provisions would apply.

Under authority of the Water Resources Act of 1971, Section 90.54 of the Revised Code of Washington (RCW), the Department of Ecology adopted the Columbia River Instream Resources Protection Program, Section 173-563 of the Washington Administrative Code (WAC), on July 24, 1980. This section of the Washington Administrative Code was adopted to promote proper utilization of the water resources of the Columbia River



This authorization is subject to the following minimum flow provisions as specified in WAC 173-563-040 and WAC 173-563-050 and the following table. It is subject to regulation by the Department of Ecology for protection of instream resources whenever the March 1 forecast of April-September runoff at The Dalles is 60 MAF or less, and when gaged flow are predicted by the BPA 30-Day Power Operation Plan to violate the following minimum flow provisions at:

Primary Control Station(s): McNary  
River Mile(s): 292.0

Minimum Average Weekly Flows  
Columbia River Projects  
(1,000 cubic feet/second)

PRIMARY CONTROL STATION:	Chief Joseph*	Wells/ Rocky Reach*	Rock Island & Wanapum*	Priest Rapids	McNary	John Day	The Dalles
RIVER MILE:	(545.1)	(515.6) (473.7)	(453.4) (415.8)	(397.1)	(292.0)	(215.6)	(191.5)
Jan	30	30	30	70	60	60	60
Feb	30	30	30	70	60	60	60
Mar	30	30	30	70	60	60	60
Apr 1-15	50	50	60	70	100	100	120
Apr 16-25	60	60	60	70	150	150	160
Apr 26-30	90	100	110	110	200	200	200
May	100	115	130	130	220	220	220
Jun 1-15	80	110	110	110	200	200	200
Jun 16-30	60	80	80	80	120	120	120
Jul 1-15	60	80	80	80	120	120	120
Jul 16-31	90	100	110	110	140	140	140
Aug	85	90	95	95	120	120	120
Sep	40	40	40	40	60	85	90
Oct 1-15	30	35	40	40	60	85	90
Oct 16-31	30	35	40	70	60	85	90
Nov	30	30	30	70	60	60	60
Dec	30	30	30	70	60	60	60

\* For the reach from Grand Coulee through Wanapum, minimum average weekly flows shall be as shown above, or as necessary to maintain minimum flows (subject to low runoff and adjustment) at Priest Rapids, whichever is higher. As provided in WAC 173-563-050(1), the minimum average weekly flows set forth in this subsection are subject to a reduction of up to 25 percent during low flow years, except that in no case shall the outflow from Priest Rapids Dam be less than 36,000 cfs.

Use of water under this authorization shall be contingent upon the water right holder's utilization of up-to-date water conservation practices and maintenance of efficient water delivery systems consistent with established regulation requirements and facility capabilities.

Use of water under this authorization can be expected to be curtailed at least once in every 20 years.

The annual quantity herein allocated is a portion of the amount reserved by the adoption of the John Day/McNary Reservation. The priority date of this filing, as against other uses, is July 24, 1980.

REPORT BY:

Philip N. Kerr

Philip N. Kerr

DATE:

16 April 1992

APPROVED BY:

Doug Clausing  
Doug Clausing, Section Supervisor

DATE:

5/6/1992

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and to protect and ensure the viability of the instream resource values associated with the main stem of the Columbia River in the future through the establishment of minimum flows and conservation and efficiency fundamentals relating to out-of-stream and instream uses and values. Each water right application being considered for a permit after the date of adoption of WAC 173-563 must be evaluated relative to the conservation and efficiency fundamentals and will be subject to the instream flows adopted for the appropriate river reach.

On July 24, 1980, the Department of Ecology adopted Chapter 173-531A WAC, which provides certain reservations of waters from the John Day and McNary Dam pools of the Columbia River for future irrigation and municipal purposes. WAC 173-531A-040(1) and (2) provides that 1,320,000 acre-feet per year is reserved from the John Day and McNary Pools for future irrigation use and that the priority date of each filing shall be the effective date of the regulation, July 24, 1980, or the date the application is filed, whichever is earlier.

#### Conclusions

Based on data available, the proposed source is expected to be in continuity with the Columbia River until proven otherwise to the satisfaction of the department. The following conclusions are based on this premise:

Consistent with WAC 173-531A, water is available for proposed withdrawal of 2250 gpm for the beneficial purpose of irrigation and frost protection.

Granting a permit will not impair existing rights.

The water use is not detrimental to the public interest.

#### Recommendations

Based on the above facts and conclusions an instantaneous quantity of 2250 gpm and 508 acre-feet of water per year is recommended for irrigation and frost protection of 120 acres. For irrigation, 468 acre-feet of water is authorized from April 1 through October 31. Frost protection is authorized 40 acre-feet of water during frost season. These recommendations are made with the following provisions:

This authorization to use public waters of the state is classified as a FAMILY FARM PERMIT in accordance with Chapter 90.66 RCW (Initiative Measure No. 59). This means the land being irrigated under this authorization shall comply with the following definition: Family Farm - a geographic area including not more than 2,000 acres of irrigated agricultural lands, whether contiguous or noncontiguous, the controlling interest in which is held by a person having a controlling interest in no more than 2,000 acres of irrigated agricultural lands in the State of Washington which are irrigated under water rights acquired after December 8, 1977. Furthermore, the land being irrigated under this authorization must continue to conform to the definition of a family farm.

All water wells constructed within the state shall meet the minimum standards for construction and maintenance as provided under RCW 18.104 (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells).

Installation and maintenance of an access port as described in Ground Water Bulletin No. 1 is required. An air line and gage may be installed in addition to the access port.

A suitable measuring device approved by the Department of Ecology shall be installed and maintained in accordance with WAC 508-64-020 through WAC 508-64-040. (Installation, operation and maintenance requirements attached hereto.)

The Department of Ecology will however, remain open to and consider any evidence gathered (chemical analysis, temperature, pump test, or water level surfaces) that clarifies the continuity issue. Provisions would be amended accordingly prior to issuing a certificate of water right.